Claims

1. A process for producing a fullerene shell tube, which comprises heat-treating a fullerene whisker or fiber at a temperature of from 500 to 1,000°C.

2. The process for producing the fullerene shell tube according to claim 1, wherein the fullerene is C_{60} fullerene, a higher-order fullerene having the carbon number of 70 or more, a metal-containing fullerene or fullerene derivatives.

3. A fullerene shell tube in which a diameter is in the range of from 10 nm to 100 μm, and a length is 100 nm or more.

4. The fullerene shell tube according to claim 3, wherein the tube wall comprises crystalline carbon or amorphous carbon.

5. The fullerene shell tube according to claim 3 or 4, wherein the end of the tube is closed or open.

6. The fullerene shell tube according to any of claims 3 to 5, wherein the inside is hollow, or the inside is filled.